

Table 16. Capital Cost and Performance Parameters of Selected Commercial Distributed Generation Technologies

Technology Type	Year	Average Generating Capacity (kW)	Electrical Efficiency	Combined Efficiency (Elec.+Thermal)	Installed Capital Cost (\$2003 per kW of Capacity)*	Service Life (Years)
Solar Photovoltaic	2002	25	0.14	N/A	\$6,500	30
	2005	25	0.16	N/A	\$6,000	30
	2010	25	0.18	N/A	\$4,750	30
	2015	25	0.20	N/A	\$3,779	30
	2020	25	0.22	N/A	\$3,178	30
	2025	25	0.22	N/A	\$2,650	30
Fuel Cell	2002	200	0.36	0.75	\$5,200	20
	2005	200	0.36	0.75	\$5,200	20
	2010	200	0.49	0.72	\$2,500	20
	2015	200	0.50	0.72	\$2,150	20
	2020	200	0.51	0.72	\$1,800	20
	2025	200	0.52	0.73	\$1,450	20
Natural Gas Engine	2002	200	0.31	0.77	\$1,160	20
	2005	200	0.32	0.77	\$1,130	20
	2010	200	0.33	0.77	\$1,030	20
	2015	200	0.33	0.78	\$ 980	20
	2020	200	0.34	0.78	\$ 930	20
	2025	200	0.34	0.79	\$ 915	20
Oil-Fired Engine	2002	200	0.31	0.83	\$1,320	20
	2006	200	0.31	0.82	\$1,240	20
	2010	200	0.31	0.82	\$1,150	20
	2015	200	0.31	0.81	\$1,040	20
	2020	200	0.31	0.81	\$ 990	20
	2025	200	0.31	0.81	\$ 990	20
Natural Gas Turbine	2002	1000	0.22	0.65	\$1,909	20
	2005	1000	0.23	0.66	\$1,909	20
	2010	1000	0.24	0.67	\$1,678	20
	2015	1000	0.25	0.68	\$1,622	20
	2020	1000	0.26	0.69	\$1,566	20
	2025	1000	0.27	0.70	\$1,538	20
Natural Gas Micro Turbine	2002	200	0.25	0.61	\$1,926	20
	2005	200	0.30	0.63	\$1,620	20
	2010	200	0.36	0.63	\$1,415	20
	2015	200	0.37	0.64	\$1,143	20
	2020	200	0.38	0.65	\$ 870	20
	2025	200	0.39	0.65	\$ 818	20

*Installed costs are given in 2003 dollars in the original source document.

Sources: National Renewable Energy Laboratory, *Gas-Fired Distributed Generation Technology Characterization: Fuel Cell Systems*, Final Draft, August 2003, National Renewable Energy Laboratory, *Gas-Fired Distributed Generation Technology Characterization: Gas Turbines*, Final Draft, August 2003, National Renewable Energy Laboratory, *Gas-Fired Distributed Generation Technology Characterization: Microturbines*, Final Draft, July 2003, National Renewable Energy Laboratory, *Gas-Fired Distributed Generation Technology Characterization: Reciprocating Engines*, Final Draft, July 2003, Navigant Consulting, Inc., *The Changing Face of Renewable Energy*, public study (Navigant Consulting, June 2003), and ONSITE SYCOM Energy Corporation, *The Market and Technical Potential for Combined Heat and Power in the Commercial/Institutional Sector*, (Washington, DC, January 2000).